

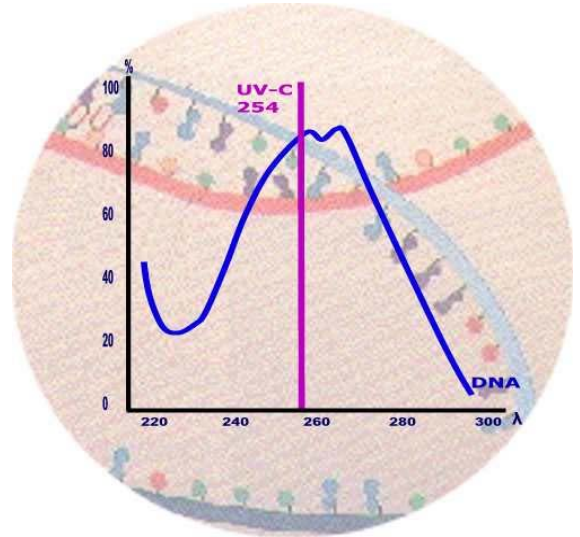
# UV Air & Surface Disinfection

## UV Disinfection: The Basics

Increasingly stringent hygiene demands require extra vigilance to ensure that products and packaging are bacteriologically safe and clean. Our range of Air & Surface disinfection units provide the means to treat problem areas, allowing the disinfection of products, packaging and even conveyor belts in just a few seconds, without using chemicals or wet systems.

## How does UV Disinfection work?

Ultra-violet light which is invisible to the naked eye, causes irreparable damage to all living micro-organisms. Every different type of organism needs a specific dosage of UV energy to deactivate it. The UV energy affects the bonds in the cells' DNA structure, preventing the cells from replicating i.e. effectively killing the organism.



## Why use UV light?

UV is a non-contact, non-chemical, non-taint, disinfection technique and it leaves no residue. The only input is electromagnetic energy in the form of light. No other disinfection technique offers this unique set of advantages, making UV the ideal disinfection technology for a wide range of applications. UV can be used to reduce spoilage, improve shelf life and prevent cross

## Advantages

- Increased shelf and storage life of products gives improved product quality
- UV Disinfection is quick (just a few seconds)
- No use of chemicals
- Dry & cold disinfection
- Non-contact (can be used on soft, perishable items)
- Low processing costs
- Easy to maintain
- No risk of overdosing
- Non-taint
- Easily configured into complete tunnels (low care to high care transfer applications)
- Custom designs to suit your application



Surface disinfection system equipped as standard with:

- UV Cassette/s
- Lamp cooling system
- Control panel



**UVO3 Ltd** 15 Greenfields, St. Ives, Cambridgeshire, PE27 5HB, UK  
Tel: +44 (0)1480 355446  
E-mail: [sales@uvo3.co.uk](mailto:sales@uvo3.co.uk)

Fax: +44 (0)1480 353487  
Web: [www.uvo3.co.uk](http://www.uvo3.co.uk)

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## UV Surface Disinfection

### Packaging

For the disinfection of packaging materials such as lids, covers, caps, food trays, yoghurt pots, tinfoil, etc.

### Food Products

For the disinfection of actual food products including fruit, bread, cooked chill (high risk) products etc., usually treated whilst on production lines.

### Conveyor Systems

For the disinfection of conveyor belt surfaces which are in contact with food products to prevent cross contamination.

### Disinfection Tunnels

Used, for example, for low care to high care transfer where a dry 'chemical free' disinfection method is required.

### Bespoke Systems

At UVO3 we understand that each customers' needs are unique. We are happy to design bespoke disinfection systems to meet your exact requirements.

## Air Disinfection



UVO3's range of UV Batten Units disinfect air to give improved levels of hygiene and reduce airborne contamination. UV treated air can also reduce the effects of 'sick building syndrome'.

Use in:

- air conditioning systems
- food production areas
- hospitals
- doctors waiting rooms
- offices & schools
- livestock/poultry sheds

Additionally, food storage areas employing forced ventilation can benefit from reduced product wastage and increased storage times.

**Please contact us to discuss your requirements.**

**Table 1: Micro organism with corresponding UV-C doses**

Micro Organism	Dose (mJ/cm <sup>2</sup> )
<i>Aspergillus flavus</i>	60
<i>Aspergillus niger</i> (bread)	100
<i>Bacillus anthracis</i>	5.0
<i>Campylobacter jejuni</i>	2.9
<i>Clostridium botulinum</i>	4.0
<i>Escherichia coli</i>	3.0
<i>Legionella pneumonia</i>	2.5
<i>Listeria monocytogenes</i>	4.0
<i>Mucor Mucedo</i>	60
<i>Penicillium chrysogenum</i> (fruit)	50
<i>Penicillium Roquefortii</i>	13
<i>Salmonella typhi</i>	2.1
<i>Salmonella enteritidis</i>	8.0
<i>Staphylococcus aureus</i>	5.0

The UV dosages shown above give a reduction of 90% (based on UV at 254 nm). A reduction of 99% can be achieved by multiplying the dose shown by 2. A reduction of 99.9% can be achieved by multiplying the dose by 3, etc.



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